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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,870	12/14/2001	Stephen Arthur Anderson	01-754	5982

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EXAMINER	
BOYD, JENNIFER A	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,870	ANDERSON, STEPHEN ARTHUR	
	Examiner	Art Unit	
	Jennifer A. Boyd	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9 and 12-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9 and 12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Applicant's Amendments and Accompanying Remarks, filed June 20, 2005, have been entered and have been carefully considered. Claims 1- 6, 9, 12 – 13, 15 and 17 – 18 are amended, claims 7 – 8 and 10 – 11 are cancelled and claims 1 – 6, 9 and 12 – 19 are pending. In view of Applicant's amendments, the Examiner withdraws all previously set forth rejections as detailed in the previous Office Action. After another search was conducted, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claims 1 - 19 remain rejected under 35 U.S.C. 1 12, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The details of the rejection can be found in paragraph 3 of the Office Action dated January 21, 2005. The rejection is maintained.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 - 2, 4, 9, 12 – 13 and 15 - 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Puech (GB 384,930).

Puech is directed to improvements in cowling for aviation engines for minimizing or extinguishing fire (Title).

As to claims 1, 4, 12 – 13 and 15, Puech teaches a cowl for aviation engines designed not only to impede the advance of any fuel fire breaking out around the engine but to localize the flames to their point of origin, but also to enable extinction thereof with the only means on board (lines 10 – 15). The cowl is provided with ventilating openings covered with a triple layered covering (lines 15 – 30). The triple covering consists of a layer of metal gauze, a layer of forminous (porous) fabric of amiathus, asbestos or the like of suitable mesh and a metal grid of suitable mesh (lines 60 – 70). The Examiner equates the porous triple layer covering to Applicant's "porous flame arresting fibrous matrix".

As to claim 2, Puech teaches that the triple layer covering can be bolted to the cowl (lines 65 – 70). It should be noted that if it is bolted, it can be removed as required by Applicant.

As to claims 9 and 19, Puech teaches that one of the layers comprises metal gauze (lines 60 – 70).

As to claim 17, Puech teaches that all three layers of the triple layer covering are porous fabrics. It is reasonable to assume that the voids will be at least slightly different sizes due to inconsistencies in manufacturing.

As to claim 18, Puech does not suggest that the triple layer covering is extendable.

As to claims 1, 12 and 16, although Puech does not explicitly teach the claimed void size being smaller than the maximum void size which limits flame propagation through said member as required by claims 1 and 12 and the flame arresting matrix has a percent density of between 10 – 30%, it is reasonable to presume that the void size being smaller than the maximum void size which limits flame propagation through said member as required by claims 1 and 12 and the flame arresting matrix has a percent density of between 10 – 30% are inherent. Support for said presumption is found in the use of like materials (i.e. a cowl for aviation engines designed not only to impede the advance of any fuel fire breaking out around the engine but to localize the flames to their point of origin, but also to enable extinction thereof with the only means on board (lines 10 – 15). The cowl is provided with ventilating openings covered with a triple layered covering (lines 15 – 30). The triple covering consists of a layer of metal gauze, a layer of forminous (porous) fabric of amiathus, asbestos or the like of suitable mesh and a metal grid of suitable mesh (lines 60 – 70)) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of Puech would obviously have been present once the Puech product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Puech (GB 384,930) in view of McCullough, Jr. et al. (US 4,844,974).

Puech teaches the claimed invention above but fails to teach that the matrix comprises irregularly intertwined filaments.

McCullough, et al. is directed to antistatic, antislosh, flame arresting structure for use in containers holding flammable fluids (Title). McCullough teaches that the structure comprises a batting or fluffy structure having considerable loft (column 5, lines 30 – 50). McCullough teaches that a structure containing a greater amount of the coil-like fibers than sinusoidal or linear fibers provides the more effective barrier against the spread of flame fronts (column 3, lines 55 – 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an irregularly intertwined matrix as suggested by McCullough as the flame arrestor of Puech motivated by the desire to create a more effective barrier against the spread of flames.

7. Claims 5 - 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puech (GB 384,930) in view of Nevin (GB 2,266,051 A).

Puech teaches the claimed invention above except fails to disclose that the material has a plurality of insulative thermal blankets disposed adjacent one another around the hot casing, wherein the fire retarding member is disposed between adjacent sections of the insulative thermal blankets as required by claim 5 and the insulative thermal blanket is disposed around the hot casing and the fire retarding member is disposed around the insulative thermal blanket as required by claims 6 and 14.

Nevin is directed to an anti-fire structure commonly used for fire protection for various locations in aircrafts (Abstract). Figure 1 teaches the extinguishing of spilt liquids such as petrol, oil and kerosene burning to flames by use of the anti-fire structure (Figure 1 and page 6). Nevin teaches an anti-fire structure comprising metal structures such as metal wool or metal tangles alternating in a carpet in a layered fashion (Abstract and see Figures 1, 5 and 6). Nevin teaches that the anti-fire structure can be rolled onto a fuel tank, equated to Applicant's "hot casing", with the carpet side facing the fire to quench a burning fire (Abstract, see Figure 1 and page 6). Nevin teaches that in the anti-fire structure contains metal structures such as metal wool or metal tangles that horizontally divide a carpet into layers of alternating carpet sections and metal layers. See Figures 1, 5 and 6. Each portion of carpet separated by the metal layers is a considered to be Applicant's "insulative thermal blankets". Carpets are known in the art to be insulating materials.

It would have been obvious to one of ordinary skill in art at the time the invention was made to dispose the extinguishing metal product within an insulative material such as a carpet as suggested by Nevin motivated by the desire to reduce the temperature of the casing.

Response to Arguments

8. Applicant's arguments in regards to the previously applied art rejections have been considered but are moot in view of the new ground(s) of rejection.

In response to Applicant's argument that claims 1 – 19 comply with the enablement requirement, the Examiner respectfully argues the contrary. Applicant argues that one of ordinary skill in the art would in fact appreciate how to determine maximum void size. Applicant

mentions two patents, US Patents 4,013,190 and 6,494,189, which teach flame arrestors having pores of a given size selected such that flame propagation is prevented and the flames are quenched. US 6,494,189 is directed to a flame arrestor system for a fuel pump inlet where the fuel arrestor system comprises an open cell foam. US 4,013,190 is directed to a flame arresting and explosion attenuating system for use in fuel tanks where the arrestor material is also a foam material. Applicant indicates that the maximum void size varies depending on the arrestor material type and configuration, expected fuel source and particular application in which the flame arrester is employed. One of ordinary skill in the art could not rely on the teachings of US 6,494,189 and US 4,013,190 to provide guidance as to how to determine maximum pore size since the cited patents use foam arrestor materials and not the fibrous matrix material of Applicant. The rejection is maintained.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Boyd
September 15, 2005

Ula Ruddock
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Primary Examiner
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